

What is claimed is:

1. A method comprising:  
receiving asset classes with corresponding sets of financial data;  
determining variation information for the sets of financial data; and  
determining a final set of factors based on the variation information.
2. The method of claim 1 further comprising determining risk associated with a portfolio of one or more assets using information derived from the final set of factors.
3. The method of claim 2 wherein the information derived from the final set of factors comprises risk factor coefficients calculated using a regression based on the final set of factors and historical data for the one or more assets.
4. The method of claim 1 wherein determining the final set of factors comprises:  
determining an initial set of factors based on the variation information; and  
determining the final set of factors based on a plurality of principal components associated with the initial set of factors.
5. The method of claim 1 wherein the final set of factors are associated with mutually independent random variables.
6. The method of claim 5 wherein the final set of factors correspond to mutually uncorrelated series of numbers, respectively corresponding to series of samples of the mutually independent random variables.
7. The method of claim 1 wherein a first one of the sets of financial data comprises a plurality of index return series, each index return series comprising a plurality of historical prices of a financial index.

8. The method of claim 7 wherein the variation information for the first one of the sets of financial data comprises a set of mutually uncorrelated return series.
9. The method of claim 8 wherein determining the variation information for the first one of the sets of financial data comprises:
  - calculating a first covariance matrix based on the plurality of index return series;
  - calculating a first set of eigenvectors and corresponding first set of eigenvalues for the first covariance matrix;
  - selecting a subset of the first set of eigenvectors, based on the corresponding first set of eigenvalues; and
  - determining the set of mutually uncorrelated return series based on the subset of the set of eigenvectors.
10. The method of claim 9 wherein determining the final set of factors comprises:
  - calculating a second covariance matrix based on an aggregate set of return series which includes the set of mutually uncorrelated return series;
  - calculating a second set of eigenvectors for the second covariance matrix; and
  - determining the final set of factors based on the second set of eigenvectors.
11. An article of manufacture having computer-readable program portions embodied therein, the article comprising instruction for causing a processor to:
  - receive asset classes with corresponding sets of financial data;
  - determine variation information for the sets of financial data; and
  - determine a final set of factors based on the variation information.
12. A system for managing an investment portfolio comprising:
  - a factor module configured to
    - receive asset classes with corresponding sets of financial data;
    - determine variation information for each of the sets of financial data; and
    - determine a final set of factors based on the variation information.

13. The system of claim 12 further comprising an analyzer module configured to determine risk associated with a portfolio of one or more assets using information derived from the final set of factors.

14. The system of claim 13 further comprising a rebalancer module configured to determine a rebalanced portfolio based on risk associated with a risk target, wherein the risk associated with the rebalanced portfolio is closer to the risk associated with the risk target than the risk associated with the portfolio is close to the risk associated with the risk target.